without setting forth any steps involved in the process, results in an improper definition of a process. In this regard, the dependent "use" claim 21 is being converted to the independent "method" claim, as shown on the attached marked-up pages.

3. Further, the Examiner rejects claims 1-20 and 23 as being indefinite because of the term "low melting" used in claims 1 and 23, which is not defined by the claim. Yet further, the Examiner rejects claim 6 as being indefinite because of the term "moderately" used in said claim. In this respect, please amend claims 1, 6 and 23 to overcome this objection by introducing definitions of these terms, as shown on the attached marked-up pages. Please note that this amendment is supported on page 3, last paragraph, of the description.

Please further combine claims 6 and 7 and delete claim 7 without prejudice.

4. Furthermore, the Examiner rejects claim 11, which recites the sodium silicates ratio, although this have not been previously mentioned in the claims. To overcome this objection, please amend claim 11, as shown on the attached marked-up pages. Please note that this amendment is supported on page 5, second paragraph, of the description.

5. The Examiner rejects claim 2 and 3 because the specification does not provide enablement for preparing active biocidal composition. Further, the Examiner cites Olson, US 4,731,195, which teaches the encapsulation of bleach particles with inorganic compounds by using heat.

In view of Olson's '195 patent, the Examiner wrote that:

> *"A biocidal component would not retain its property after being subjected to ignition or heating. Specification does not provide enough description about the biocidal preparation with heat and the working example is lacking to address this issue. In the absence of further guidance, as the heat would diminish the properties of, or destroy, the biocidal component, undue experimentation would be required by one skilled in the art to make and/or use the claimed invention".*

To clarify the discussed subject matter, the Applicant respectfully submits the working example, based on the disclosure set forth in the specification at page 2, Table I, Table II, and page 7, to demonstrate the preparation of the presently claimed biocidal composition:

Example:

> 800 g granulated TCCA was blended in a cylindrical jar, with 50 g boric acid (powder or granules), 50 g sodium silicate and 100 g alum, as a flocculant, over a period of 10-15 min. The blend was further mixed with cellulose as required by the UN test and tested for ignitability. Tablets were pressed from this blend at the standard conditions used for TCCA tablets.

In this respect, we would like to comment that the product is merely a blend of solids: the biocide (which is ca 90% of the mixture) and two other components, which are biologically inactive. In fact, the blend is prepared by simply blending the components, granulating the blend on a two-roll compactor and pressing tablets (up to 3" in diameter) that are used as biocides in various applications.

The non-biocidally active components come into expression in case of a conflagration of the store or the shipping unit of the bulk of tablets. It is well known that in such a case the biocide (in our case TCCA) can enhance the fire due to its strongly oxidizing character.

The presently claimed product, prepared as above shown, was proved not to assist the fire development, on the contrary. The product was subjected to the intense heat of a propane burner flame, and it was found that it did not even melt, while no burning of the tablets occurred. The reason for this behavior is the formation of glass at high temperatures which protects the TCCA from contact with the fire.

In regular use as a biocide, the protecting components are dissolved in water and do not impede on the disinfection process.

Rejections under 35 U.S.C. § 102

6. The Examiner objects the novelty of claims 1, 2, 4-6, and 23 in view of Olson, US 4,731,195.

Please note that Olson teaches the multilayer system for coating encapsulated materials. According to Olson,

the inner coating has never been heated above 94°C (column 4, lines 60-65). Also the composition of the inner coating is quite different from the outer coating (column 5, lines 23-36), comprising various organic materials, such as long chain fatty acids and waxes (column 5, lines 24-35).

Quite contrary to the invention of Olson based on the multilayered coating (column 3, lines 23-42 and 54-66), the present invention teaches an amorphous non-layered, inorganic admixture, which reduces the oxidative capacity of the composition in the whole volume. Accordingly, an attempt of practicing Olson's invention by avoiding multilayered coating would definitely contradict Olson's teachings.

In this respect, please note that the Applicant found the way to preserve all the properties of biocide compositions and reduce their oxidative capacity without burying biocides in multiple layers of various materials, including organic ones. In fact, as detailed above, biocidal compositions claimed in claims 1, 2 and 4-6 are non-layered admixtures composed of biocides and low-melting glass. Method for rendering biocide composition less comburant as claimed in claim 23 is based on use of a low-melting glass to inhibit the oxidative activity of biocides. Thus, it is maintained that claims 1, 2, 4-6 and 23 are novel in view of Olson.

Rejections under 35 U.S.C. § 103

7. The Examiner objects the inventiveness of claims 7, 8, 9, 10-16 in view of Olson, US 4,731,195.

8. In this respect, we would like to draw the Examiner's attention to the arguments above regarding special features of the present invention, distinguishing it from prior techniques. Namely, the instant biocidal composition comprises a biocidal component and a minor admixture of inorganic compounds forming low-melting glass when heated.

A person with ordinary skill acknowledges that normal glass comprising silica melts at 1400-1600°C, whereas certain salt mixtures comprising borates and silicates melt at temperatures lower than 800°C and are, therefore, called "low-melting glasses" (anhydrous sodium tetraborate, for example, melts at 743°C, boric acids at less than 240°C).

The instant biocidal composition is, thus, entirely different form prior art ones. Whereas published compositions are composite materials of several organic components, numerous phases and complex structures, the instant composition is a simple, chemically homogeneous

mixture. Said inorganic, glass-forming component surprisingly achieves reducing too high oxidative capacity, without excessive diluting the active agent. In this regard, the instant biocidal composition, particularly as defined in amended claim 1, is surely novel and inventive.

9. Claims 7-9 and 10-16, as depending on non-obvious claim 1, are believed to be also non-obvious. Anyway, the claims specify a composition of the amorphous non-layered admixture of biocides and low-melting glass, and reacting conditions to form the same. As mentioned above, Olson teaches a multilayer coating and a process for its preparation. Hence, Olson teaches away from the present invention by suggesting to achieve the same result of reducing oxidative capacity of active ingredients by using a complex multilayered coating instead of a simple admixture of the present invention. Thus, it is maintained that claims 7-9 and 10-16 are inventive over Olson.

Further, the Examiner also cites Jones et al, US 5,478,482, against claims 17, 18 and 20, as Jones et al teaches the preparation of biocidal compositions for treating water systems, use of aluminium sulfate in a composition, and that the composition can be in the form of tablet, stick or other solid forms.

In this respect, please note that Jones is mentioned on page 2, last paragraph, and page 3, last paragraph, of the present specification to exemplify the prior-art biocidal compositions containing relatively low concentrations of an oxidant. It is an advantage of the present invention that the biocide compositions contain more than 80% of the oxidant, and it is believed that claims 17, 18 and 20 are inventive over Jones.

10. Finally, the Examiner rejects the inventiveness of claim 19 over Olson, in view of Jones et al, saying that "combined teachings of Olson, in view of Jones et al makes it prima facie obvious to develop a biocidal with less combustible property like halogenated hydantoins.

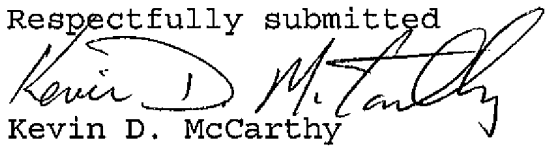
In this respect, please refer to our arguments above. Jones teaches low concentration oxidant compositions, and Olson teaches a multilayered coating to preserve the oxidative properties of the core biocide compounds. Combining both citations would definitely teach away from the present invention by suggesting to preserve the oxidative properties of relatively weak biocide compositions coating them with a multilayer system. In our opinion, such combination would result in very low

oxidative activity of the biocide product. Thus, it is maintained that claim 19 is inventive over the combined teachings of Olson and Jones.

Conclusion

11. The Applicants, therefore, respectfully submit that following the amendments of the claims, and in view of the above explanations, including a working example, all the pending claims should now be held allowable.

Respectfully submitted



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